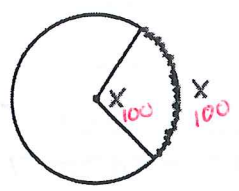


NAME _____

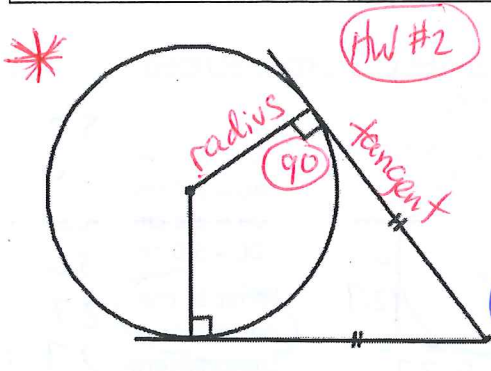
Unit 6 NOTES #5
Circle / Angles / Arcs
Properties



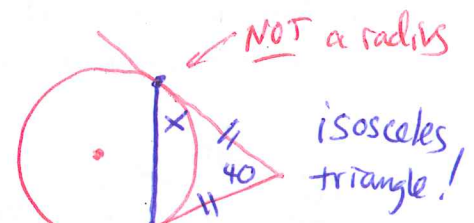
Definition: the measure of an arc is equal to the measure of the central angle

Congruent chords intercept congruent arcs

* HW #1
 ← Find the perimeter
 A perpendicular from the center to a chord bisects ← cut in half the chord

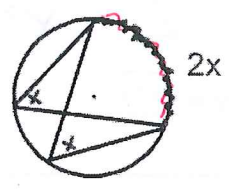
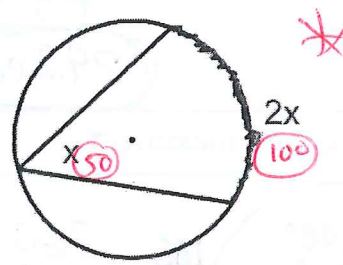


- A tangent line is perpendicular to the radius at the point of tangency



- Tangent segments from the same point to a circle are congruent

$$\begin{array}{r} 180 \\ - 40 \\ \hline \square \\ \div 2 \end{array}$$



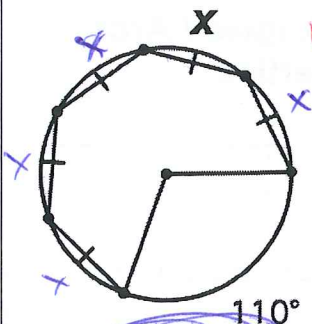
Two inscribed angles intercepting the same arc are congruent

Angles inscribed in a semi-circle are right angles

$m\angle A + m\angle C = 180$
 $m\angle B + m\angle D = 180$
 Opposite angles of a cyclic quadrilateral are supplementary (180)

Parallel lines intercept congruent arcs

1. Find the missing arc measure X .



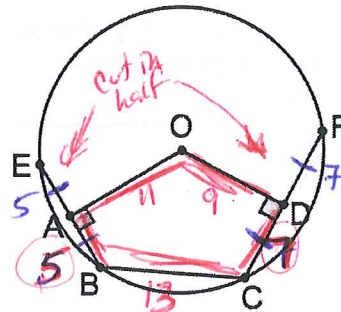
whole circle = 360

$$\begin{array}{r} 360 \\ -110 \\ \hline 5x = 250 \\ \div 5 \\ \hline x = 50 \end{array}$$

$x = \underline{50}$

$x = 50$

2. Find the perimeter of pentagon ABCDE.



cut in half

BE = 10 cm

CF = 14 cm

OD = 9 cm

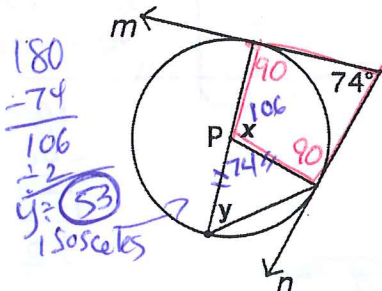
OA = 11 cm

BC = 13 cm

$5 + 7 + 9 + 11 + 13 = \underline{45 \text{ cm}}$

3. Find the missing angle measure X

Find the missing arc measure y .

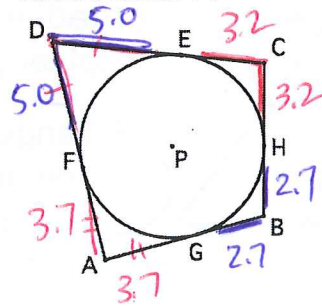


$$\begin{array}{r} 360 \\ -90 \\ -90 \\ -74 \\ \hline x = 106 \end{array}$$

$x = \underline{106}$ $y = \underline{53}$

4.

Quadrilateral ABCD is circumscribed about circle P.



- If AF = 3.7 cm
- BG = 2.7 cm
- CH = 3.2 cm
- DE = 5.0 cm

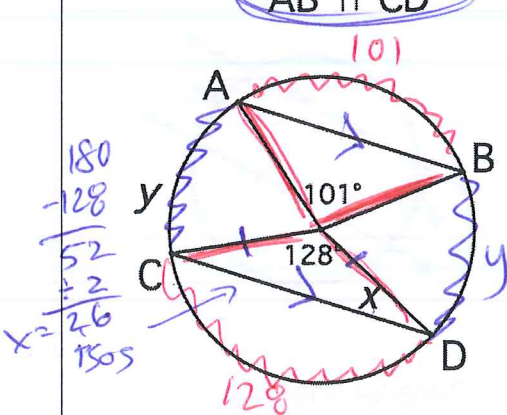
What is the perimeter of Quadrilateral ABCD?

$$\begin{array}{r} 5.0 \\ 5.0 \\ 3.2 \\ 3.2 \\ 2.7 \\ 2.7 \\ 3.7 \\ + 3.7 \\ \hline 29.2 \text{ cm} \end{array}$$

5. Find the missing angle measure X

Find the missing arc measure y .

$\overline{AB} \parallel \overline{CD}$

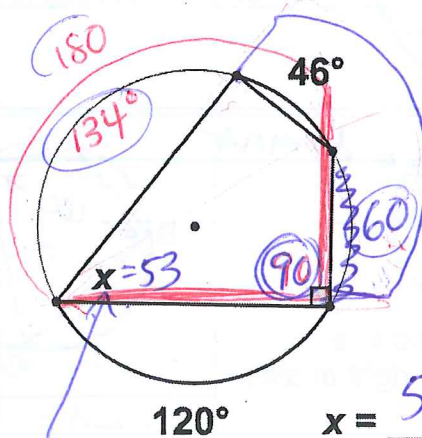


$$\begin{array}{r} 360 \\ -101 \\ -128 \\ \hline 131 \\ 2y = 131 \\ \div 2 \\ \hline y = 65.5 \end{array}$$

$x = \underline{26}$ $y = \underline{65.5}$

6. Find the missing angle measure X

Find the missing angle measure X



$$\begin{array}{r} 360 \\ -134 \\ -46 \\ -120 \\ \hline 60 \end{array}$$

$x = \underline{53}$